

# **NAVAL POSTGRADUATE SCHOOL**

## **Monterey, California**



## **THESIS**

**COMMUNICATING REENGINEERING AT NAVAL  
FACILITIES ENGINEERING COMMAND, SOUTHWEST  
DIVISION**

by

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September 2002

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**COMMUNICATING REENGINEERING AT NAVAL FACILITIES  
ENGINEERING, SOUTHWEST DIVISION**

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## **ABSTRACT**

This research evaluates how effectively the reengineering process concept has been communicated within the Southwest Division in San Diego, California. It clearly defines reengineering, why reengineering has been embraced by Southwest Division, and what senior leadership's communication objectives and strategies have been since its inception. The research analyzes senior leadership's communication of organizational reengineering and some of the obstacles they have encountered. The research provides action recommendations, where warranted, for greater success in communicating the reengineering process transformation.

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## **I. INTRODUCTION**

### **A. BACKGROUND**

Reengineering represented the dawn of a new era within the Naval Facilities Engineering Command (NAVFAC), Southwest Division. Although reengineering impacted NAVFAC as a whole, not all of NAVFAC reengineered. Southwest Division elected to reengineer in response to customer feedback regarding the quality of service. The communication of reengineering at Southwest Division thus is the focus of this thesis. Southwest Division, as a reengineering organization, provides an excellent opportunity to observe how the communication of complex change such as reengineering is implemented.

Because of the rapid acceleration of the Information Age, downsizing, and Total Quality Management approaches towards leadership, as well as a wide array of different expectations being placed on the Department of Defense (DOD), Southwest Division had to restructure its way of thinking about organizing. But what were these expectations and who expected them?

Southwest Division's customers sought and expected:

- Fewer people to have to deal with
- Southwest Division to be part of one integrated NAVFAC execution organization
- Better overall quality
- Faster, more timely response
- Better communication
- Improved cost control
- Improved accountability

Southwest Division, as with many organizations, had been accustomed to the traditional stovepipe, departmentalized organization structured hierarchically. Southwest Division leadership recognized that a team was needed to facilitate and guide the transformation from the old to the new business line processes to ensure rapid response to customer needs through expanded capability and improved communication. Thus, The Installation Engineering Team West (IET) was formed as a coalition to present a "one

NAVFAC" storefront approach to customer communications. It consisted of six Naval Facilities Engineering Command offices on the west coast providing facilities and installation engineering services to NAVFAC customers. These offices are Southwest Division, Public Works Center San Diego, Engineering Service Center, and Engineering Field Activity (EFA) Central West, Public Works Center San Francisco Bay, and EFA Northwest. Through this coalition approach, Southwest Division leadership planned to become a world-class facilities engineering organization, working together for the benefit of the customer. Because of increasing competition from other Government agencies for customer business, there was need for Southwest Division to become more flexible, efficient, and quicker to respond to customer needs. Southwest Division saw itself as having to restructure itself and conform to changed external conditions caused by the downsizing of the Navy and its facility requirements, decreased budgets, and the increasing fleet recapitalization needs.

Southwest Division leadership recognized it needed to communicate change within the organization in response to these conditions in order to survive. Newer, more efficient processes such as reengineering had to be effectively communicated within Southwest Division or it would not remain a viable, relevant member of the Navy and Marine Corps team. Thus, it became increasingly evident that an organizational transformation was essential and "reengineering" was the means whereby this organizational transformation would occur.

Reengineering is a radical redesign of business processes for dramatic improvement. Customer focus teams were established in response to customer concerns of non-responsiveness, and stovepipes were dismantled and their functions incorporated into teams.

To implement an organizational reengineering policy transformation, senior leadership needed to effectively communicate what is organizational reengineering, the reasons for its implementation, and the commands goals it wishes to achieve as a result of the transformation. If there is value to reengineering, then it is essential that this value be effectively communicated throughout the NAVFAC community.

## **B. RESEARCH OBJECTIVE**

This research will evaluate how effectively the reengineering process concept has been communicated within the Southwest Division in San Diego, California. My objective is to clearly define reengineering, why it has been embraced by Southwest Division and what senior leadership's objectives and implementation strategies have been since its inception. I will analyze senior leadership's communication of organizational reengineering and some of the obstacles that they have encountered, as well as provide action recommendations, if warranted, for greater success in communicating the reengineering process transformation.

## **C. RESEARCH QUESTIONS**

### **1. Primary Research Question**

- How effectively has reengineering been communicated by senior leadership throughout the Southwest Division?

### **2. Subsidiary Research Questions**

- What is reengineering and what factors have caused Southwest Division to embrace it?
- How has Southwest Division leadership conceptualized or framed organizational process reengineering? What methods has Southwest Division leadership used to communicate its reengineering goals and procedures?
- What were the communications metrics, if any, that leadership utilized to gauge reengineering success within Southwest Division?
- What are some of the critical barriers to effectively communicating reengineering and how might these barriers be overcome?
- How effectively has Southwest Division implemented its communication methods?
- What actions might Southwest Division leadership take to enhance the effective communication of organizational transformations such as reengineering?

## **D. METHODOLOGY**

The methodology used in this thesis research to answer the primary and subsidiary research questions is the following:

- Conduct Internet research and literature research about organizational reengineering and communicating complex change

- Conduct surveys with Southwest Division personnel impacted by reengineering in order to assess the strengths and weaknesses of how it has been communicated and to acquire suggestions for improved communication

## **E. ORGANIZATION OF THESIS**

This thesis contains four additional chapters.

Chapter II provides a literature review so that readers become aware of what others have done to communicate and implement complex change such as reengineering.

Chapter III familiarizes the reader with how the Southwest Division communicates complex change.

Chapter IV describes the methodology used to gather data and the data collected. The Southwest Division reengineering policy will be discussed, how it is communicated as well as the procedures and regulations for implementation, media choices to communicate reengineering, and metrics to measure its success or failure. This chapter will also analyze the data, focusing on implementation barriers, solutions and cost, benefit and feasibility considerations with reference to the communication of reengineering.

Chapter V provides conclusions and recommendations.



## II. LITERATURE REVIEW

### A. BACKGROUND

Communicating complex change such as organizational reengineering is a tremendous challenge for organizational leadership. Several researchers such as Hammer, Colin Coulson, Manganelli and Klein, and Daniel Hunt have recognized the challenge facing organizational leaders and have published their insights on communicating a complex change such as reengineering. In this literature review I place the research objectives within the context of established works in the field of communicating complex change with an emphasis on reengineering, sometimes referred to as Business Process Reengineering (BPR).

### B. RECENT STUDIES

Several definitions of reengineering exist. Hammer and Champy define reengineering as "The fundamental rethinking and **radical redesign** of business **processes** to achieve **dramatic** improvements in critical, contemporary measures of performance, such as cost, quality, service and speed." [Ref: 1]

Morris and Brandon provide a broad-based definition that highlights the importance of how leadership must implement new business processes during organizational transformation. Reengineering is "an approach to planning and controlling change. Business reengineering means redesigning business processes and then implementing the new processes." [Ref: 2] Their definition discusses the importance of implementing processes. An essential aspect of implementing processes is the ability for organizational leadership to successfully convey those processes. In essence, successful process transformation cannot be done without implementation of good communication strategies.

Communicating complex changes such as reengineering is no simple undertaking for the organizational leader. Hammer recognized this challenge. Businesses, he states, must undertake quantum leaps in performance, achieving breakthroughs rather than marginal improvements to business processes. A "radical redesign" means starting with a clean slate, throwing away the old and starting over, in essence, reinventing how we do

our work. If an organization starts with a clean slate, this is a "radical redesign", a complex change that must be communicated carefully if leadership wishes to meet organizational objectives.

Colin Coulson provides a useful insight into the significance of communication during organizational transformation. He notes "Notwithstanding sustained top level commitment, poor communication of the need for, and consequence of change, is the single most destructive element in a re-engineering environment." [Ref: 1]

Communication and the sharing of knowledge cannot be overemphasized in his view. Coulson also believes that the reasons behind reengineering must be clearly communicated throughout the organization. Leadership must develop a communication plan that articulates the benefits from the organizational transformation. These benefits must be clearly communicated to all levels of the organization, and a clear two-way communication strategy must be developed at the early stages of the reengineering program. The strategy should convey clear messages of the organization's goals and its determination to increase the driving forces that direct behavior away from the status quo. Leadership's communication plan must also explain how people will develop the skills required in the new reengineered structure, what will be the new reward systems, and how to use new computer technologies. [Ref: 1]

Carr and Johansson emphasize the importance of developing a communication plan and analyzing the organization's culture and communication norms during the early stages of organizational transformation. They note that appropriate media choices are an essential part of the strategy to overcome barriers to change and attain complex organizational change objectives. [Ref: 3]

Thus, the media choice becomes part of the communication plan or strategy. Carr and Johansson differentiate between active and passive communication. Active communication such as face-to-face, even if not one-on-one, provides greater opportunity for interaction. This, they believe, provides a far greater likelihood of buy-in to the complex organizational change than passive communication such as memos. Appropriate media choice is thus a communication strategy that helps to identify, obtain, and disseminate internal and external information, which ultimately helps to attain business

objectives. The natural resistance to change or "cultural pushback" can be overcome by appropriate media choice, thus allowing for more thorough, effective and truthful communications that help leadership obtain organizational change objectives.

Manganelli and Klein also note the significance of proper communication strategies during the early stages of organizational transformation. In fact, they claim that a:

communication plan should be the first order of business for the reengineering team. And, as with any communication plan, it needs to begin by identifying the stakeholders. Whom will the reengineering project affect? How? What are their interests in the outcome? What questions are they likely to have? The underlying question for all employees is how will it affect my job, my compensation and my career? [Ref: 4]

Manganelli and Klein also note that a good communication plan must specify:

- The information that people will need
- When the information will become available
- How to get the information to the people that need it

A feedback mechanism that allows the reengineering team to know what information has been received and understood and that will let the recipients submit questions, comments, and suggestions.

Manganelli and Klein believe that the initial communication by leadership is a critical factor and sets the tone for determining the future success of organizational change. Initial communication by leadership should include the following eight factors:

- Why the reengineering project is needed
- What the scope of the project is
- What results management expects
- Who was selected to be on the reengineering team and why
- What will happen during the project and when
- What involvement people will have in the project
- What can be told now about how reengineering will affect all involved
- When the rest of the story can be told

They further go on to state that communication should reflect the idea that "we are all in this together", and it should not imply blame for anyone, even former employees. Additionally, they claim that communication should include statements of commitments that management is prepared to make and that these should be firm commitments, not merely hopes. [Ref: 4]

Daniel Hunt's book, "Process Mapping, How to Reengineer Your Business Processes", also provides an excellent insight into the importance of communication and how the lack of it is at the core of many organizational problems. Hunt claims that it is not the lack of information within an organization that generates many problems, but rather it is the communication difficulties that generate the biggest problems and inefficiencies. In other words, if good communications take place between parties involved, this drastically reduces the chances of bottlenecks occurring causing the organizational change processes to fall apart. In essence, by changing the way people communicate, significant improvements to a business can occur. [Ref: 5]

Michael Hammer is the originator of reengineering. His ideas have transformed the modern business world. Although all of the researchers mentioned in this literature review discuss the importance of communicating complex change, none have had the impact of Hammer, especially with reference to reengineering and the communication of complex change such as reengineering. In fact, many of the researchers previously mentioned even quote Hammer in their works. When Southwest Division reengineered, it claimed to adopt Hammer's methodology.

Hammer and Stanton believe that leadership encounters obstacles when it fails to use good communication strategies, and end up trying to sell something to a group of people who do not want to buy what they have to sell. Leadership, they argue, must recognize that as with any change, people must be willing to accept the change or it becomes nothing more than a paper exercise. The reconfiguration of the entire business system not only requires leaders communicating complex change to "think out of the box" but also requires extraordinarily innovative and creatively crafted communication techniques in order to ensure that people understand and embrace the organizational

transformation. Hammer and Stanton identify six primary impediments to successful communication of complex change. These are:

- Disbelief
- False familiarity
- Fear of layoffs
- The rumor mill
- Sloppy execution: (incomprehensibility, abstraction, complexity, and clichés)
- Too much communication

First, the extravagant announcements that management may make such as "all is well" and things are improving for the better may foster "disbelief", jeopardizing credibility and undermining the communication of complex change such as reengineering. Leadership may, for example, try to create a belief among organizational members that "all is well" when, in fact, all may not be well. Statements such as "all is well" when people know that significant organizational problems exist may make people within the organization mistrust leadership.

Second, "false familiarity" is a bad communication technique that can also undermine the communication of complex change. By generating a sense among employees that complex change such as reengineering is nothing more than another program and that "we have been through this before" people will tend to think of it as the "latest fad" and they will wait it out until it passes.

The third impediment to the communication of complex change is "fear of layoffs". Although there is a difference between layoffs and firings, no matter what leadership says, all that employees will hear is "I'm going to be fired". Complex change such as reengineering is often associated with reductions in personnel. Such insecurity can only incite anxiety and exacerbate the implementation of organizational objectives. Hammer and Stanton argue that issues such as whether or not there will or will not be reductions in personnel should be announced early, loudly and clearly, thereby getting ahead of the anxiety curve. Information and telling the truth is always better than uncertainty.

The fourth impediment to the effective communication of complex change such as reengineering is the rumor mill, or the communication of information through other than official channels. Officially, leadership in one way may have described the situation causing need for complex change, but by the time this reason for change works its way through the grapevine, the reason may have been changed quite significantly. Furthermore, the grapevine is always operating and attempts at keeping secrets always fail. If people try to keep secrets, the only thing people will pick up on is that people don't want them to know.

The fifth impediment is poor execution, or falling into the common trap of incomprehensibility, abstraction, complexity and clichés. Incomprehensibility is speaking to employees in jargon with which they are unfamiliar. In other words, managers must speak of complex change in a language common to those most impacted by it, i.e., the employees. The bottom line here is that leadership must speak their listeners' language.

Abstraction is speaking in terms of ideas and concepts rather than actual experience, e.g. "We seek excellence". Such statements are flat and generic and do not speak to people in terms of stories and examples that they can relate to.

Complexity also stifles effective communication. In an attempt to stimulate open communications, some managers provide their people with too much detail. Often the audience could care less about such details and do not grasp most of them anyway. Although quantity of detail does not always increase complexity, Hammer and Stanton believe that effective communications of complex change are generally simple and that complex and detailed messages often obscure meaning.

Hammer and Stanton also argue that clichés such as "your satisfaction is our success" or "world-class performance" have little meaning when communicating complex change. These are ritualistic incantations managers utilize either because they are really not sure what they want to say or because they are unwilling to find a unique and memorable way to express their true objectives. Such clichés just stifle the communication channel making it difficult for people to hear anything later on.

The sixth and final impediment to communicating complex change is too much communications. Often too many official memos and e-mails arrive and are quickly

placed in the circular file or deleted. To be heard, complex change rhetoric such as reengineering must not be boring and must rise above the clutter and stand out. In essence, the excessive rhetoric often bores and does not hold the audience's attention.

Hammer and Stanton provide an excellent survey of the obstacles to effective organizational communication of complex change as noted above. In their book, "Reengineering the Corporation", they stipulate the ten principles of complex change communications, which will be briefly outlined. These principles are:

- Segment your audiences
- Use multiple channels of communication
- Use multiple voices
- Communicate clearly
- Communicate, Communicate, Communicate
- Honesty is the only policy
- Use emotions, not just logic
- Communicate to heal
- Communicate tangibly
- Listen, Listen, Listen

Segment Your Audiences, means that leadership must divide an organization into specific groups, each of which may react to complex change in a different and unique way. The communication approach must be appropriate to the target audience. In other words, leadership might talk to personnel who are about to be downsized more personally and sensitively than they would if they were simply advising them of the number-one source of customer complaints.

The second principle, Use Multiple Channels of Communication, means that leaders of complex change must use as many communication media as possible, such as, presentations, articles, videos, design simulations, etc. Just as advertisers use a mix of print, TV, radio, Internet and other channels to reach their consumers, so too must reengineers be receptive to and implement an array of communication media to spread the word.

The third principle, Use Multiple Voices, basically means that the communications should come from more than just the Chief Executive Officer (CEO) or, for example, the reengineering czar. Several leaders within the organization must continuously reinforce the message in order to communicate the complex organizational change. These multiple voices (several leaders) communicating the change reinforce the original message and enhance the organizational change objectives.

The fourth principle, Communicate Clearly, states the message must be clear, specific, and comprehensible to the different target audiences. Just as traditional marketing has the "four Ps" of product, price, promotion and position, reengineering has the "four Ps" of purpose, process, progress and problems. In essence, leadership must clearly delineate the purpose of complex change such as reengineering and the **processes** to implement these changes. Additionally, leadership must advise people of the **progress** or the up-to-date developments of the change efforts as well as the **problems** associated with complex change such as reengineering.

The communication of problems encountered in describing and implementing the change process is, according to Hammer and Stanton, the most salient, though often overlooked, communication factor to communicate. It is uncommon for companies to acknowledge glitches, snafus, and errors regarding organizational transformations such as reengineering. The interesting thing is that the admission of difficulties generates tremendous credibility within the organization and often the ways to overcome these difficulties.

The fifth principal, Communicate, Communicate, Communicate, is essential to reinforce the message of communicating complex change to an organization. Many managers believe that once they say something, people have gotten the point. This couldn't be further from the truth as repetition can reinforce the message.

The sixth principle, Honesty Is The Only policy, cannot be overemphasized. Just as marketers must deliver what they promise to sustain their businesses, so too must managers communicating complex change implement what they say. To do otherwise is not only unethical but also foolish and counterproductive. Managers who understand and



implement relentless honesty can help enhance the shift in thinking needed to implement the complex change. In short, truth buys credibility.

The seventh principal, Use Emotions, not just logic, is essential to enhance the organizational change objective. Without passion in the message, the significance of the message will diminish. In essence, leadership must display enthusiasm and exuberance when communicating the complex organizational change they wish their organizations to adopt.

The eighth principal, Communicate to Heal, is also essential when communicating complex change such as reengineering. As many, for example, perceive reengineering negatively, leadership has a moral obligation not just to further the reengineering effort but also to minimize the stress and trauma some believe it can cause. This may entail messages of hope, consolation, encouragement or appreciation. Also, recognizing and valuing the people within the organization may curb anxiety and help to deflect negative feelings often associated with change and inspire support for whatever that change might be.

The ninth principal, Communicate Tangibly, is essential to convey important issues. This means providing people with an experiential framework from which to gauge complex organizational change. As reengineering is a complex change that is an organizational transformation, experiential examples such as issuing a communications message built around songs can help create support. Hitachi Data Systems, a California-based division of the Japanese company, implemented a communications messages built around Elvis Presley songs, which helped people to realize how much change will be required. As many of the people within this organization were familiar with Elvis Presley's music, the familiarity of these songs allowed for greater impact of the complex organizational change message. In essence, the familiarity of the songs helped make people realize the need for the changes. They could tangibly relate the songs to the organizational transformations leadership desired to implement.

The tenth and final principal, Listen, Listen, Listen, is essential. Communication is not just talking. It is listening and being receptive to the needs of others. Communication must be two-way and involve keen, attentive listening. People who feel

they have been heard, who feel that they have a voice, who see themselves as participants rather than as victims, are much more likely to feel positive about complex change and act accordingly. [Ref: 6]

Hammer also emphasizes in "Beyond Reengineering" the importance of encouraging learning when communicating complex change within the organization. Traditionally, communications were channeled vertically, up and down the organizational hierarchy, with dissemination based on the "need to know" principle. Management communication systems must encourage learning in ways different from traditional stove-piped organizations. All must feel that they are part of the process and can individually contribute to improving the organization. In essence, it is the sharing of ideas that helps to foster creativity and innovation, which facilitates leadership's change objectives.

This literature review has shown the significance of effective communication when communicating complex change. Effective communication is essential in order to obtain buy-in from personnel at every level of the organization. Without implementation of effective communication to the people within the organization, it is unlikely that the organizational change being introduced will be successful. The researchers cited have all indicated that an organization contemplating change must clearly communicate those intentions throughout the organization or the change process will either fail or be more difficult than necessary to implement.

In the case of reengineering, implementers of this organizational transformation needed to recognize that reengineering focuses not merely on what already exists, but as expressed in the word "radical", it creates revolutionary transformation or redesign, throwing away the old and starting over with a clean slate. This "radical redesign" of the organization in essence represents a wholesale transformation of processes. This transformation cannot be done without implementation of sound communication strategies.

The next chapter focuses on organizational change at Southwest Division, specifically examining the factors initiating the need for organizational change and the organizational processes of communicating complex change that leadership implemented.

### **III. COMMUNICATING COMPLEX CHANGE AT NAVFAC SOUTHWEST DIVISION**

Research has clearly shown that the communication of a complex change such as reengineering is a significant organizational leadership challenge. The communication of reengineering at Southwest Division represented just such a challenge.

This chapter provides the background and communication strategies implemented by the Southwest Division leadership facing this communication challenge. First, this chapter examines the factors, both internal and external, that caused the need for implementing reengineering at Southwest Division. Second, the chapter examines the communication processes that Southwest leadership used to communicate this complex change to the organization.

#### **A. FACTORS CREATING NEED TO COMMUNICATE REENGINEERING**

What were the internal and external factors leading to Southwest Division leadership needing to communicate a complex organizational change such as reengineering? Leaders of successful organizations recognize that their organizations must provide customers with timely and efficient delivery of goods and services. Customer dissatisfaction was the significant factor, the catalyst, prompting Southwest Division leadership's recognition that it needed to implement a significant organizational change throughout the Southwest Division.

In December of 1995 Southwest Division leadership participated in a Naval Facilities Engineering Command (NAVFAC) survey. This survey consisted of fielding input from various of NAVFAC's customers served by Public Works Centers (PWC's) and Engineering Field Divisions (EFD's) in order to assess customer perception of the supplies and services provided. The customer survey showed that none of its customers had satisfaction ratings higher than 48%. In essence, the customers perceived the supplies and services provided to be less than satisfactory.

Southwest Division leadership recognized that private sector metrics generally indicate that organizations with satisfaction ratings of less than 80% are unlikely to succeed. Based on the results of this survey, it became evident that customers were

dissatisfied with the level of service. The survey results also indicated that customers sought and expected:

- Fewer people to have to deal with
- One integrated NAVFAC execution organization
- Better overall service quality
- Faster, more timely response
- Better communication
- Improved cost control
- Improved accountability

Southwest Division leadership, including the Head of Contracts and the Commanding Officer, recognized that processes needed to be changed. Leadership also recognized that, due to increasing competition from other government agencies such as the General Services Administration (GSA) for customer business, there was need for Southwest Division to become more flexible, efficient and quicker to respond to customer needs.

The next section discusses how Southwest Division leadership communicated the need for change, the reason for choosing reengineering, and how it would be implemented at Southwest Division.

## **B. LEADERSHIP'S PROCESS OF COMMUNICATING THE CHANGE TO REENGINEERING**

The researcher conducted surveys of Southwest Division employees regarding the communication of reengineering at Southwest Division. The surveys noted that on 14 February 1996 the Commanding Officer announced reengineering at an all hands meeting. These surveys further revealed that during this transition period E-mails were sent out to detail the status of reengineering. Additionally, personnel surveyed indicated that the Chief of Contracts held all hands meetings with Contract Specialists (1102s) and reengineering became a regular topic at code staff meetings because there was a lot of confusion as to what reengineering was and how it was to be implemented. The confusion was based largely on the newness of the process as well as resistance to change.

To alleviate this confusion and clarify objectives, town hall meetings followed up all hands meetings with smaller groups led by the Chief of Contracting. A communication team was implemented in order to put together a communication strategy that included not only meetings but also regular e-mails.

Personnel surveyed further noted that Process Action Teams (PATs) were also formed, containing one member from each team who was responsible for keeping his team updated on the reengineering efforts. Survey results indicated that the Camp Pendleton Area Focus Team (AFT) was the first team (prototype) to successfully reengineer. Other teams reorganized based on the lessons learned from the Camp Pendleton AFT.

The successful communication of the change to reengineering was essential for Southwest Division to become more flexible, efficient and more responsive to customer needs. The NAVFAC Improvement Plan Team recognized that changed conditions such as downsizing and decreased budgets provided no recourse but for Leadership to alter the way the organization implemented its objectives if it wished to survive.

The clear communication of reengineering objectives was significant to both customer and employee alike. If leadership believed that the value added benefits of reengineering were a reality then these value added benefits had to be effectively communicated throughout Southwest Division.

Anticipating customer requirements was the focal point from which leadership communicated the need for change. Evaluating product and service competencies and developing appropriate communication strategies was central to assessing customer requirements.

Leadership also implemented an internal communication transformation that consisted of developing a customer outreach program, promoting unfiltered communications with all stakeholders, instituting inter/intra regional and team communications, and developing and maximizing the use of electronic media. Additionally, leadership monitored the success of this communication effort by developing and integrating metrics within the organization to gauge delivery of required information to internal users, customers and suppliers.

## **1. Reasons for Choosing Reengineering as a Change Strategy**

Based on the success of Michael Hammer's approach to reengineering as noted by two Southwest Division senior managers, leadership determined that implementing Hammer's techniques would be the most effective way to insure that products and services are delivered to customers timely and efficiently. Leadership believed that by redesigning the process for the delivery of products and services, the desired outcomes could be achieved. As a result of these beliefs, leadership utilized reengineering as the mechanism for instituting this organizational transformation.

Although aspects of TQL and continuous improvement were applied to the new processes, leadership saw reengineering as a means of implementing the radical organizational transformations that needed to occur. As the new organizational structure required new business processes, reengineering was seen as the most viable method of instituting these new processes because radical redesign is fundamental to the reengineering transformation.

This redesigned business process included the establishment of customer-focused teams in response to customers' perception of NAVFAC non-responsiveness. To improve quality and delivery, stovepipes were eliminated as well as hand-offs in execution. In essence, the implementation of a reengineered product and service delivery process for products and services was instituted which included the redesign of other major business processes. The organizational restructuring challenge faced by leadership assumed that efficient and effective delivery of products and services could not occur using less dramatic organizational interventions such as TQL. Reengineering was chosen because unlike TQL, reengineering assumes that the existing processes no longer produce the delivery of products and services in an efficient and effective manner. TQL, on the other hand, assumes the basic process is fundamentally effective but needs continuous improvement to become efficient. TQL is the logical follow on to reengineering, and continuous improvement in the reengineered and redesigned process are still vitally important.

As reengineering was the method of organizational transformation leadership elected to implement, leadership made Dr. Michael Hammer's video available to all

hands as a means of communicating this new process within the organization. The video was seen as a means of "getting out the word" and educating the workforce on the principles of reengineering according to Hammer and how these principles would ultimately impact Southwest Division.

Once reengineering was implemented, the organizational structure needed to be altered to be compatible with the new process. In essence, leadership needed to foster a major change in beliefs and understanding about old processes.

Previously, the organizational structure was hierarchically based and personnel received rewards according to the needs of those within the organizational hierarchy. That is to say, if an employee expected to be rewarded or promoted, the employee was expected to respond to the needs of their supervisor. Rewards could be in the form of additional compensation, public recognition or promotion. By responding to the needs of the supervisor, the employee was thought to be loyal to the organization as a whole. This was done by doing such things as working hard, doing good work, and sacrificing self-interest for the good of the organization. Although supervisor and customer needs were aligned, this reward structure and the hierarchy it reinforced were not resulting in work that met the needs of the customer.

Within the individual departments and corresponding structures, the hierarchical process achieved high levels of efficiency and effectiveness. The problem was that the work tasks required several departments to work together to produce the end product for the customer. As such, the customer became increasingly alienated from the process as satisfaction for the needs of those within the organizational structure made the needs of the customer become less paramount. As such, the customer was not being provided with a good level of service under this hierarchical stove-piped system with rewards focused on supervisor rather than customer satisfaction.

The evolving work tasks required several departments to work together to provide the end products and services to corresponding customers. However, Southwest Division had no systems or mechanisms in place to ensure that departments worked together. In fact, the organizational structure, the reward system, and the poorly coordinated processes often made the success of the individual departments take precedence over

those of the customers. Because meeting the requirements of the individual department was the criteria for successful task completion vice the direct needs of the customers, they were often receiving products and services that did not meet the level of efficiency or quality they sought.

The customer had to understand the department system, which made it difficult to access the process. This further alienated customers and exacerbated their dissatisfaction with Southwest Division. If, for example, a customer wanted a product or service, they had to go through a barrage of administrative hurdles in order to get what they wanted. By the time the customers received their products and services, they were often perceived as sub standard.

Because reengineering is such a radical transformation, Southwest Division leadership recognized it needed to design a plan for communicating this organizational transformation from the old to new business line processes to facilitate rapid response to customer needs. This improved communication and organizational restructuring were essential if leadership was to reengineer its processes in order to meet customer needs.

As a result of implementing reengineering at SWDIV, Leadership replaced the stove piped functionally divided departments with eight basic organizational divisions as follows: Commander (Department 00), the Comptroller (Department 01), Acquisition (Department 02), Strategic Business (Department 03), Operations (Department 05), BRAC (Base Realignment and Closure: Department 06), Housing (Department 07) and Operational Support (Department 07).

Additionally, the new process included the establishment of cross-functional teams designed to service one or more customers. These cross-functional teams provided a customer-focused impetus requiring consistent communication. For example, the Claimant Liaison officer was created to serve as a focal point for all major claimants. Site teams were also established. They were located at the customer sites to provide faster response for the day-to-day, constant and predictable customer needs. The Activity Liaison Officers (ALNOs) acted as focal points with base customers, providing them with options and focusing on meeting their needs by making service faster, better, cheaper and easier.



The Area Focus Team (AFT) was established to provide customer focused, highly efficient and high quality products. The Specialist Team was established to provide expert technical support to the teams and assistance in planning to meet organizational objectives. Additionally, the AFT was established to provide continuing formal and informal education to accelerate the professional and technical development of team members.

Southwest Division's organizational transformation coupled with this redesigned delivery process now acted to make the employee, the team and the entire organization focused on the customer. Rewards and promotions were now based on satisfying the customer vice meeting the objectives of the departments via the supervisors within a hierarchically stratified organization.

The modified process should result in higher quality, reduction in costs, ease of access, greater customer understanding, and enhanced customer choice. This modified process also acted to open the doors of communication between Southwest Division and its customers. Customers would no longer be expected to conform to or understand departmental procedures in order to attain needs. Rather, with the improved delivery process to include cross-functional teams receptive to customer needs, customer's needs could be communicated more efficiently and expeditiously to Southwest Division employees. Customer feedback is an element of communication essential for the redesigned service delivery process to determine if it was successful in providing quicker response to Customer needs.

This chapter has examined the factors causing the need for implementing reengineering at Southwest Division and the organizational processes of communicating complex change that leadership implemented. The next chapter describes the methodology used to gather data, the data collected, and analyzes that data.

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## **IV. DESCRIBE METHODOLOGY, DATA AND ANALYSIS**

This chapter describes the methodology used to gather data, discusses the data collected, and provides an analysis of the data collected and its significance.

### **A. RESEARCH METHODOLOGY**

The researcher obtained data from an open-ended survey sent to a sampling of Southwest Division individuals who were involved in reengineering at various levels of the process. A copy of the survey appears in the appendix. The survey was sent via e-mail to twelve individuals nine of whom responded. Follow-up phone calls were made to gather information to clarify some of the survey responses.

This survey data provided important information about leadership's communication of the change to reengineering and the way the communication was perceived by Southwest Division employees. The survey provided the respondents with a brief background of the thesis topic and eleven open-ended questions designed to provide the researcher with a clear understanding of employee perceptions of why Southwest Division embraced reengineering. The questions were designed to gather employee perceptions regarding how reengineering was communicated, whether or not it was successful, obstacles encountered, and how the communication of this complex change could have been improved. Survey respondents were guaranteed anonymity. Therefore, none of the names of the respondents are used in this research. Additionally, no codes, team names, or other organizational specific identifying notations are used. Therefore, the research describes only the content of the responses. The researcher's criteria for choosing these individuals was to gather a representative sampling of individuals representing a variety of experiences with organizational transformation processes. The researcher surveyed those both influential in implementing reengineering transformation and working level personnel within the organization. Five of these individuals have or still hold supervisory positions. One of the individuals was extremely influential in both implementing and communicating reengineering at Southwest Division. The remaining surveyed consisted of working level employees impacted by the organizational transformation.

All respondents work on various teams at Southwest Division in San Diego representing a cross section of Southwest Division personnel. In essence, the respondents had characteristics that mirrored a cross section of Southwest Division personnel. All were at SWDIV during the inception of reengineering and have remained in the organization to witness the repercussions, both negative and positive. From these individuals the researcher was able to derive a good overview of the perceptions of the communication of reengineering at all organizational levels.

## **B. DATA OBTAINED AND ANALYSIS OF DATA**

### **1. How Was Reengineering Being Communicated?**

The first survey question asked how reengineering was being communicated. Responses varied, but all agreed that it was communicated from the top-down. Survey results indicated that one primary method of communication were all hands meetings led by a Naval Captain influential in implementing reengineering. Respondents noted that e-mails, Process Action Teams (PATs), Town Hall Meetings and Captain's calls also represented a large part of the communication effort. All Respondents stated that there were several Captain's calls meetings where the Commanding Officer (CO) would provide information about what was going to happen, and how it was going to improve lives and enhance Customer service.

One respondent noted that the Southwest Division Chief of Contracting, and another individual, who was appointed as the full time reengineering Lead, led the Town Hall meetings. These individuals were also present with rollout teams at off-sites to answer questions regarding reengineering.

Another respondent stated that a communication team was formed by the Reengineering Lead to create a communication strategy that consisted largely of e mailing and newspapers to Command employees. This same respondent noted that leadership used these media to implement what they perceived to be the most viable means of "getting the word out."

**Analysis:** The Literature Review of this thesis references Michael Hammer's concept of reengineering as being adopted by leadership. Leadership knew that the current process needed to be changed but they were also keenly aware that this top-down

approach would only be effective if it was done appropriately. In other words, Hammer believed and Southwest Division leadership knew that leadership encounters obstacles if they fail to use communication strategies to a group of people who do not want to buy what they have to sell.

Leadership recognized that the old way of doing things was no longer working. The entire business system needed to be reconfigured. This required Southwest Division leaders to "think out of the box" and implement extraordinarily innovative and creatively crafted communication techniques in order to ensure that people understood and embraced the organizational transformation.

## **2. Why Southwest Division Embraced Reengineering**

Question two asked why Southwest Division was embracing reengineering. Responses varied, but the consensus was that the command was trying to structure the organization to ensure that the most efficient processes were utilized for optimum performance. Based on a survey conducted with many NAVFAC clients, survey results indicated there was dissatisfaction among Southwest Division clients. Leadership needed to determine which organizational transformation method to use in order to resolve this problem. One individual surveyed noted "A team of nine were locked up for two months to take the survey suggestions from the three commands and using the reengineering process detailed by Hammer...."

Personnel surveyed agreed that Southwest Division's current organizational structure is a direct result of a December 1995 customer survey that revealed that Southwest Division's customers were not happy with services. They wanted services to be better, faster, cheaper, and easier to use. Due to various initiatives regarding Navy infrastructure reduction in the post-Base Realignment and Closure (BRAC) era, a West Coast Reengineering Team (RET) was established to reengineer the process of delivering products and services to Southwest Division customers. Personnel surveyed indicated that the RET was tasked with three things:

- Focus the process on customers rather than on internal functions
- Involve customer points of contact throughout the process as early and as often as possible

- Ensure that customers perceive the redesign as a "seamless" delivery process providing dramatically improved products and services at a decreased cost

Personnel surveyed also stated that Southwest Division embraced the idea of reengineering because it provided flexibility in adjusting to the needs of the market and the customer, allowed sensitivity to competition, encouraged innovation to products and services, and provided maximum concentration on quality and customer service. Leadership also wanted a teamwork approach which reengineering promoted.

One respondent indicated Southwest Division was under pressure to reduce its size by 30%. Instead of a Reduction In Force (RIF), reengineering represented a way to cut costs.

**Analysis:** Survey results confirm that dissatisfaction and greater efficiency were the catalysts prompting leadership's thrust towards organizational transformation. Based on a leadership meeting to address this issue, it was determined that reengineering would be the process to eradicate the dissatisfaction issue. Leadership felt that if the Command embraced reengineering, customers would receive the better, faster, cheaper, and easier to use services that they desired.

Those surveyed further acknowledged Leadership's recognition of the need for change and its adoption of reengineering as a means to implement that change. In essence, leadership was tasked with communicating a fundamental rethinking of the organization, which necessitated a radical redesign of business processes with the objective of attaining dramatic improvements in performance. Southwest Division leadership clearly understood the need for change and were keenly aware that the means chosen to implement that change were a key factor in whether or not the organizational transformation would be successful.

### **3. Who Communicated Reengineering?**

Question three asked who communicated reengineering. Most concluded that typically the communication of reengineering came from the Commanding Officer (CO). Also, the respondents stated that the Executive Steering Committee (ESC) provided status emails, sometimes directly in "town hall" meetings and sometimes through the chain of command. Others surveyed noted the existence of the "underground"

communication network, otherwise known as the "rumor mill" as well as the rampant implementation of e-mail by leadership in order to get the message out to as many people as quickly as they could.

**Analysis:** As noted in the researchers Literature Review (Chapter II) regarding Hammer, the "rumor mill" can be a major impediment to effectively communicating complex change. The researcher notes that the utilization of the then neophyte information technology e-mail system to spread the word shows leadership's willingness to get the message out to as many people as they can as quickly as they could.

The researcher notes, however, that those surveyed made repeated reference to the "rumor mill". The rumor mill communicated speculation and rumors about where the organization was going. It was information expressing individual perceptions of where the organization was going during this rapid reshaping process. This rumor mill use can be interpreted as the natural result from a top down approach in that as change is communicated from the top down, rumors and speculation will naturally emerge as the details are being ironed out.

Some echelons of leadership such as the Chief of Civil Engineer Corps (CEC) acknowledged that one of the most important goals during the reengineering implementation process was to ensure an efficient and effective restructuring and that accurate and timely information was disseminated throughout the Command. The "Change Communicator" was a newsletter that endeavored to keep personnel apprised of updated information during this organizational transformation process.

#### **4. What Was Communicated About Reengineering?**

Question four asked what was specifically communicated. Personnel surveyed provided a wide array of answers. One respondent said what was communicated was the survey of the clients, the results of the process, the plan for implementation, the expectations of the implementation and reengineering status updates. Some stated that at the initial "All Hands Meetings", the CO stated that in order to stay in business, it was necessary to completely break the organization, start over from scratch, that there would be no turning back, and that there was a train coming and people needed to get on board or be left behind.

**Analysis:** The inevitability of change was a recurring theme during the reengineering process. Personnel surveyed recalled the sense of urgency being communicated to employees and what would happen if South West Division did not change the way they did things. Reengineering was sold as a customer satisfaction solution, as a means to keep the command viable in the future: i.e., if we didn't satisfy our customers, we might no longer exist. The initial "All Hands Meetings" came to the minds of many surveyed as a time in which the Southwest Division community was impacted by a strong thrust towards organizational transformation and a sense of urgency expressed emphatically. In fact, respondents recalled that the very survival of the organization was at stake without individual commitment to "getting on board the train...".

#### **5. What Were Employees Expectations About Reengineering?**

Question five asked what were the expectations of reengineering and who expected them. The respondents provided a variety of answers, but many agreed that the CO's expectations were that reengineering would take place, there was no room for failure, and there was no turning back once it began. Respondents claimed that the CO expected that some people would not buy-in to reengineering and would leave the organization. Additionally, respondents noted that the CO expected that some people would believe that we were reengineering in order to downsize and that a RIF was imminent.

Personnel surveyed also noted that the expectations of the reengineering efforts included the incorporation of Total Quality Management concepts, redesigning existing business processes, achieving innovative performance with cross functional teaming arrangements, providing one stop shopping/one face for our customers to access business lines, and nurturing a workforce that is focused on a common vision and mission.

**Analysis:** Some of the employees who fully accepted reengineering with enthusiasm expected that they would truly be empowered. Some engineers expected to be given contracting warrants, and that the contracts department would be dismantled. Some contract specialists expected more autonomy and warrants. Leadership advocates of reengineering believed that we would "win" back customers who had gone elsewhere.



Some workers expected that life would be better under the new system, and that people would work smarter, instead of harder. Senior Leadership embraced hopes that flattening the organization would make for a more efficient organization. Leadership felt the need to be faster, better and cheaper and more responsive to the client. In essence, Southwest Division had to start "thinking out of the box" and get on board the reengineering train or be run over by it.

There were expectations among leadership of reduced operating costs, and a better way to do business. In fact, faster, Better, Cheaper became the "mantra" of the re-engineering Team. NAVFAC Headquarters was expecting the reengineering to result in a cost savings to the "corporation" through efficiencies gained in establishing focused teams.

The respondents' answers seemed to indicate that the thrust of these expectations came from the Commanding Officer and the customers. The Commanding Officer reiterated that reengineering was inevitability, there was no turning back, that it would take place and failure was not an option. Customers who had gone elsewhere needed to be "won back" in the eyes of leadership.

#### **6. What Metrics Were Used to Determine Communication Success?**

Question number six asked what metrics were used to determine the success of the communication efforts. Responses were limited but diverse. Most were unaware of any metrics. One person recalled the personnel feedback survey and individual interviews. Another individual surveyed recalled that metrics for reengineering was a problem from the beginning and that several teams were established to determine the metrics of success but none were developed.

**Analysis:** The researcher believes that, although leadership was successful in communicating many aspects of this organizational transformation, this apparent lack of metrics may have been an oversight. With the implementation of a more thorough metrics system, overall personnel buy-in to the organizational reshaping could have been facilitated.

## **7. What Were the Strengths and Weaknesses of Reengineering Communication?**

Question number seven asked what were the strengths and weaknesses of how reengineering was communicated. Respondents' answers varied significantly. Some claimed weaknesses in communication were significant, others claiming reengineering was communicated well. Several respondents felt the initial meeting with the CO was a weakness. Some thought of it as confrontational. The CO mandated that this far-reaching change that would affect everyone was going to take place immediately and that there was no time to let people absorb the information. These respondents also believed the true mechanics of how the new organization would function weren't clearly communicated to everyone. All surveyed noted that emails proclaimed success before anything had begun.

Respondents further noted that the major weakness with the way senior leadership communicated reengineering was their phoniness about excitement and buy-in from everyone in the organization. Another major weakness noted was that it didn't allow for feedback from much of the workforce. One major weakness noted by several respondents was that the reengineering vision was communicated in a way that it was perceived as non-participatory and dictatorial and that there was a general feeling that employee ideas didn't count. Another individual noted that more could have been done because such an organizational transformation can never be over-communicated and that follow up after the initial communication blitz could have been better. This individual stated that upper management could have done more monitoring to insure that concepts were truly implemented. Another major weakness noted among many respondents was that reengineering didn't adequately involve the "entire organization" down to its lowest level to participate in the decision making process to promote buy-in. Many people resisted reengineering beyond what would be considered a reasonable reaction to change. Several respondents felt that there were significant strengths in the way the reengineering initiative was communicated. One respondent felt that Contract Specialists and Engineers were pleased with the reengineering arrangements and appreciated having immediate access to the different disciplines. This respondent stated that this close knit communication is essential when negotiations are required. Others surveyed thought that

one of the major strengths was the way that the CO's plans for the command were put out broadly and somewhat clearly.

Another respondent also felt that reengineering was communicated well, that it was consistent and got to all parties. Some noted strengths in that there were several consultants brought in to assist in reducing the command's reactions to change. One of the strengths noted was that the consultants focused on teamwork and the new matrix organization now in place. Leadership provided reading material and training on the concept of re-engineering.

**Analysis:** This variance of perceptions about strengths and weaknesses in communicating reengineering is indeed interesting. People were being asked to "volunteer" for positions in the new organization. Most people volunteered to do what they were already doing; staying on teams with friends, etc. Many people volunteered, but the organization needed them elsewhere, so they didn't get to go where they wanted. That's a weakness because it doesn't get buy-in from that individual or anyone else who was aware that people were being moved like pieces of machinery.

The e-mails proclaiming success before anything had begun didn't foster buy-in to the organizational transformation. The organization became divided as a result. What was really going on? Were rumors of a RIF true? At the same time that success was being proclaimed, the rumor mill was running full bore. The rumor mill was communicating such things as a loss of employment and uncertainty about future security within the organization. This in turn contributed to low morale.

Many people didn't buy-in to reengineering, believing that it was just another initiative like Total Quality Management (TQM) or Total Quality Leadership (TQL). It was a bad dream, which would soon fade into memory. After all, TQM or TQL was to take 30 years to implement, so even though the CO said that this transformation would be quick, people didn't believe that.

The majority surveyed generally saw weaknesses not in the organizational transformation but in what they perceived as a "confrontational" means of getting people to understand the change and to believe in its importance. Although resistance to change is to be expected, successful communication of change may be stifled if the method of

communicating this complex change is perceived to be too authoritarian and top-down driven. This change process did not involve the "entire" organization. As a result, complete "buy-in" to the complex changes did not occur.

Some surveyed recalled that the way reengineering was communicated led many within the organization to believe that it was just another change and that they had gone through this kind of thing before. This is because people tend to identify with past experiences with which they are familiar. As noted in the Literature Review (Chapter II), Michael Hammer referred to this perception as "False Familiarity". False familiarity can act as an impediment to the communication of complex change in that new organizational changes may be perceived by personnel as just another initiative and may not be taken seriously.

Several surveyed said it was the general resistance to change that stifled progress of reengineering rather than leadership's communication of the change. Several respondents felt that leadership's communication efforts were very good because consultants were brought in to ease the burden of change and leadership implemented enhanced teamwork. Communications were enhanced in that there were classes on Teambuilding, Situational Leadership, Effective Communications, and Process Redesign. Most of these classes were designed to assist the Command in coping with the stress of major change. Employees were strongly encouraged to take these classes.

#### **8. What Were Customer Perceptions of How Reengineering Was Communicated?**

Question eight asked what was the perception of how reengineering was communicated to customers. All surveyed said that leadership was telling customers that reengineering was to make the organization more efficient and more customer-focused.

Some respondents noted that receipt of feedback from customers about the lack of communication from Southwest Division is still a common problem. These respondents noted that basic perception is that customers want to be valued as an integral part of Southwest Division processes, including decision-making. These respondents also noted that a successful reengineering effort has to include buy-in and ownership from customers at all levels.

Another respondent simply identified reengineering as a "Mis-communication". This respondent stated that Southwest Division customers did not know who to call or where to turn and they were lost for quite a time. Interestingly, another respondent perceived that reengineering was communicated (or "sold") to customers rather effectively. According to this respondent, they were brought on board early in the process and there was a genuine effort to get "buy in" from our customers in the new process. Another respondent noted that a traveling Team went to customer facilities and briefed the customers on Southwest Division's re-engineering effort.

**Analysis:** This variance of perceptions resulted because in some instances reengineering was communicated to customers very well while in other instances communication improvements were warranted. The process structural transformations such as the Activity Liaison Officer (ALnO) position, which was created as the single point of contact for the customer, reflected leadership's genuine intent to be responsive to the customer and provide the customer with consistent information. However, the weakness was that the customers were not briefed extensively enough on how business would be conducted. This was left up to the individual teams, which resulted in a lot of frustrated customers who weren't sure why they had to do things differently. The relationships between the Area Focus Teams (AFTs) and the Resident Officer In Charge Of Construction (ROICC) offices were not clearly defined, hindering effective communication. This resulted in contracts being awarded at the AFT and "downloaded" to the ROICC office to administer with little communication as to what the project was and with major problems with the basic contract left to the ROICC to deal with.

#### **9. What Was the Perception of How Effectively Reengineering Was Communicated to Personnel?**

The ninth question asked what was the perception of how effectively reengineering was communicated to personnel specifically impacted by it. In this case, contracts personnel are the ones the researcher is primarily addressing. Those surveyed said that personnel generally saw reengineering as another idea from management, a new Admiral, or Captain making changes to which they must comply.

One respondent noted that personnel perception was that reengineering was communicated without feedback and was perceived as one-way communication. Another

respondent said that reengineering was being forced on them and they didn't understand it. Another respondent felt that communication with personnel was insufficient, that there was no input, and no effort to explain the expectations or outcome.

Another respondent noted that most people were hesitant about reengineering at first but stated that the reengineering was working better than expected. One respondent felt that reengineering was communicated well. This respondent felt the reasons for reengineering were clearly articulated in that it was made clear that if the organization didn't change the way it was doing business, there was a very good possibility that NAVFAC and Southwest Division would close down and the work would be done by organizations such as the General Services Administration (GSA). This respondent further noted that "relevance" was the word used by the briefing Team. NAVFAC and Southwest Division would cease to be relevant in the eyes of its customers, and they would soon begin to believe that there is no need for Southwest Division. This respondent believed that the "threat" was communicated well to the employees and that the employees took the threat seriously.

**Analysis:** Most surveyed once again reiterated the top-down perception of communication and the lack of good feedback throughout the entire organization. Personnel perceived reengineering as another idea from leadership that they were forced to comply with.

People are naturally resistant to change. It takes them away from their comfort zone. Personnel resistance to change can mean the downfall of a reengineering effort. Those surveyed acknowledged the natural resistance to change and perceived that the method of communication must be carefully crafted to avert people perceiving that they are being taken out of their comfort zones. This could potentially threaten the success of the reengineering effort. A comfort zone is the way people are used to doing business, the practices and procedures that they are accustomed to performing on a regular basis. People become comfortable doing things a certain way and perceive anything other than business as usual as a threat.

#### **10. What Obstacles Did Leadership Encounter While Communicating Reengineering?**

Question ten asked what obstacles, if any, leadership encountered while communicating this complex change. One respondent claimed that leadership's communication efforts were acceptable, but that it was the Southwest Division workforce that was somewhat skeptical of change, and did not want what they were trying to sell. This obstacle made it difficult for leadership to communicate reengineering plans in a way that was palatable to the personnel of SWDIV. A second respondent noted that this resistance to change incited fear, disbelief, anger, and frustration, all of which obstructed leadership's communication efforts.

A third respondent indicated that the lack of a clear plan on how to disseminate reengineering information negatively impacted communication efforts. Some leaders were not on board with it, especially the ones losing their leadership positions. A fourth respondent noted that a lack of clear understanding of the vision, lack of buy-in, and that employees didn't perceive the same need for change as management did was an obstacle to communication.

**Analysis:** Many working level employees recognized many problems that the changes created early on, but suggestions were considered by leadership to be dissension. Although resistance to change is normal, the diversity of responses from the survey reflects a lack of consistency in clearly communicating leadership's transformation intentions throughout the entire organization.

#### **11. Recommendations for Improving Communication**

The final question asked respondents for recommendations for improved communication for organizational transformations such as reengineering. One respondent noted that the initial meeting with the CO set the tone for all reengineering communications and should have been implemented differently. This respondent felt that rather than characterize reengineering as completely "breaking" the organization, and as "a train that was coming and wouldn't wait for you", reengineering should have been characterized as a transformation for a better organization. This same respondent also noted that the emails and town-hall meetings didn't allow for any feedback. Even if the

feedback fell on deaf ears, people should have been made to feel that they had an opportunity to vent or provide input.

Another respondent noted that there was some management resistance to this change and that all management needs to be totally supportive, speak with one voice, and represent a united front during organizational transformations such as reengineering. This individual also noted that documentation of process changes should be done in a more consistent, user-friendly manner to reflect new changes brought on by reengineering.

Another respondent recommended communication more extensively throughout the whole command and obtaining more feedback and recommendations from those affected. Additionally, this respondent recommended establishing and empowering an IPT to identify clear and realistic realignment objectives, establishing measurable performance metrics to ensure success, and establishing a prototype team that realigns and collects lessons learned for best practices concepts and continues to keep all stakeholders informed through continuous, electronic and verbal media.

A third respondent said the organization should be more democratic and allow for meaningful feedback loops. There needs to be more of a two-way exchange of ideas up and down the chain of command continuing with the "town hall" meetings, but also communicating better via email and in smaller group meetings. This respondent believed more face-to-face time is needed for this type of gut-wrenching change.

A fourth respondent claimed that when implementing radical organizational changes such as reengineering it should be done from the bottom up. Although this respondent acknowledged that there would always be a fair amount of resistance to change, working from the bottom up would help to insure ownership and buy-in which is the key to success in implementing organizational changes such as reengineering.

**Analysis:** The issue of feedback and recommendations from the bottom up is a recurring theme among respondents. Another common response was calling for volunteers to participate on Integrated Product Teams that would identify clear and realistic objectives, and continue to keep all stakeholders informed through continuous, electronic and verbal media, and smaller group meetings that allowed for meaningful feedback loops.



The survey results indicate that while town hall meetings and e-mail communications are excellent communication media, these media need to be broadened throughout all levels of the organization more effectively from the bottom up. Additionally, more face-to-face communication is essential as it is the most effective communication media, especially where radical organizational transformations are being implemented. The underlying theme among all respondents is that resistance to change seems to be the catalyst hindering the communication of complex changes such as reengineering. Albeit much of what leadership had to convey was well and good, respondents clearly confirm that disrupting an entire organization with rhetoric of change for the better and expecting "buy-in" in a short time frame is a tall order. The difficulties encountered while implementing reengineering was not necessarily a leadership flaw, but as evidenced by the respondents, it is often the consequence running up against a natural tendency to resist change. Those surveyed discussed the inevitability of change but also emphasized the significance of communicating complex change from the bottom up when implementing very complex organizational transformations. Bottom up communicating would help to insure greater buy in at all levels and diminishes the likelihood of future organizational friction.

The next chapter discusses conclusions and recommendations for the communication of complex change such as reengineering at Southwest Division. In addition, the primary and subsidiary research questions are answered.

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## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **A. SUMMARY OF RESEARCH**

The communication of complex change represents a significant challenge for leadership. Reengineering represented a complex change that Southwest Division leadership was tasked with communicating throughout the organization.

This thesis has two facets. First, it highlights leadership's successful communication techniques in the hopes that they will continue to implement them in the future. Second, it offers constructive criticism of the communication of the changes to reengineering so that leadership would modify future communication change strategies.

### **B. CONCLUSIONS**

This section answers the primary and subsidiary research questions posed in Chapter I.

#### **1. Primary Research Question**

- **How effectively has reengineering been communicated by senior leadership throughout Southwest Division?**

The communication of the change to reengineering was very challenging to leadership at Southwest Division. In light of the magnitude and complexity of the change that leadership implemented, it met its basic communication objective of altering the organization. However, there are lessons to be learned by leadership from this change process, the most important being that leadership must design more robust communication strategies and implement more systematic feedback loops to insure complete buy in from the organization.

#### **2. Subsidiary Research Questions**

- **What is reengineering and what factors have caused Southwest Division to embrace it?**

Reengineering is a fundamental rethinking and radical redesign of business processes to bring about dramatic improvements in performance. In essence, it is a radical transformation requiring a change in all organizational system design variables to generate a new system. In short, after the change, all organizational systems must be aligned so that organizational tasks are more effectively completed. NAVFAC and its

Southwest Division embraced reengineering because leadership believed it could no longer survive utilizing the stove piped, departmentalized organizational structure.

- **How has Southwest Division leadership conceptualized or framed organizational process reengineering?**

Leadership conceptualized organizational process reengineering with an end in mind, namely to meet the customer objectives of attaining faster, better, cheaper and easier supplies and services. Leadership conceptualized it in accordance with the objective of redesigning the entire service delivery process to meet this objective.

- **What methods has Southwest Division leadership used to communicate its reengineering goals and procedures?**

Leadership communicated reengineering goals and procedures from the top-down. The methods of communication tended to be at all hands meetings, e mails, Process Action Teams (PATs), Town Hall Meetings and Captain's calls. There were several such meetings where the Commanding Officer (CO) would provide information about what was going to happen, and how it was going to improve lives and enhance Customer service.

- **What communications metrics, if any, were utilized to gauge reengineering success at Southwest Division?**

There were limited communications metrics. Survey results indicated that these consisted primarily of some personnel feedback surveys and individual interviews. Metrics for reengineering were apparently a problem from the beginning. Although teams were established to determine the metrics of success, these teams were not developed adequately and thus did not create metrics to determine if communication of reengineering was successful.

- **What were some of the critical barriers to effectively communicating reengineering and how might these barriers be overcome?**

One of the barriers was a workforce that was somewhat skeptical of change, and did not want the organizational change that leadership was trying to communicate. This obstacle made it difficult for leadership to communicate reengineering plans in a way that was palatable to the personnel of Southwest Division. This resistance to change incited fear, disbelief, anger, and frustration obstructing leadership's communication efforts.

Furthermore, the lack of a clear plan on how to disseminate reengineering information negatively impacted communication efforts. This lack of clear understanding of the vision and the fact that employees didn't perceive the same need for change exacerbated buy-in. These barriers could be overcome by communicating more effectively from the bottom-up, thus enhancing buy-in from the entire organization rather than just a segment of it.

- **How effectively has Southwest Division implemented its communication methods?**

The researcher contends that communication methods have not been effectively communicated from the top-down. Communication has been successful in helping leadership institute the desired organizational transformations in the short term, but the lack of buy-in has caused negative repercussions in the long term. In short, the lack of large scale buy-in to reengineering due to limitations of any top-down approach that lacks appropriate feedback loops to determine perceptions of "deck plate" workers may undermine the long-term success of this change. Consequently, leadership needed to be more inclusive when communicating reengineering to help guarantee the long-term success of the change.

- **What actions might Southwest Division take to enhance the effective communication of reengineering?**

Essentially, leadership must be all encompassing and all-inclusive in its communication messages and be responsive to all the concerns within the organization. Failure to do so breeds resentment, breaks down loyalty to the organization, and incites the potential defection of employees to other Government agencies.

This is precisely the challenge for leadership: to communicate in such a way that it embraces all facets of the organization in meeting organizational objectives. Leadership may, for example, alter the tone of communicating organizational transformation, e.g., not come off as condescending and non-responsive to the overall needs of the individual worker. People need to be assured of their importance to the organization, that they will continue to be an essential part of the organization, and that their ideas do mean something. The workforce needs to be assured that that their ideas about the change to reengineering are important enough to be considered whether or not these ideas are implemented. The workforce's perception that their ideas about reengineering were not

heard undermines workforce morale and confidence in leadership that may have long-term consequences. In essence, leadership needs to be more open to the concerns of all levels within the organization by being more receptive to feedback from the bottom up.

## **C. RECOMMENDATIONS**

### **1. Combat Complacency in the Communication of Complex Change**

The communication process is as complex as the reengineering change that leadership wished to implement. Consequently, the communication process requires careful thought and well-designed strategies. Leadership must be keenly aware of the processes, channels, and ways they communicate their messages. They can ill-afford to be complacent that the message sent is the message received and understood.

Additionally, entropy theory states that systems (e.g., organizations) will naturally devolve from order to disorder unless there is new energy that enters the system. Communication can be seen as a source of new energy that can help prevent organizational entropy, whose sources are complacency, resistance to change, and fear of change. A well thought out communication strategy about the change to reengineering could have fueled the organization not only with new knowledge but also with the vigor (e.g. new energy) to sustain the transformation over time.

### **2. Allow for Increased Feedback at all Levels of the Organization**

Communicating complex change is a tremendous challenge for leadership. As this fast-paced globalized world becomes even more dynamic, leaders will be confronted with having to implement increasingly more complex organizational transformations. Human beings are as complex, if not more complex, as the changes leadership wishes to implement. As a result the affiliation motive, the need for human beings to socialize, and the need to be heard are essential when implementing complex change. This research indicates leadership diligently communicated their message. However, many workers felt alienated from an organization that no longer seemed receptive to their issues, as communication was top-down implemented and lacking of sufficient feedback loops. Consequently, leadership should reassess its communication feedback mechanisms when communicating future complex changes such as reengineering.

### **3. Focus More on Human Capital**

The perception among many surveyed is that complex changes such as reengineering focus too much on the organizational objective (e.g., faster, better and cheaper deliverables) and not enough on the people within the organization that make the change happen. The perception that such radical changes are communicated without input at all levels of the organization can only hinder leadership's organizational objectives in the long run no matter how noble these objectives may be.

### **4. Inject More Objectivity into the Communication Process**

Leadership should continuously review the communication feedback loops and be receptive to changes that may enhance organizational objectives. In essence, leadership should implement communication strategies that take into account the expressing or dealing with facts or conditions as perceived without distortion by personal feelings, prejudices or interpretations. Leadership should take into account the organization as a whole and recognize that, although leadership's perception of conditions is indeed salient, this does not discount the equal salience of those often most impacted by complex organizational change, the workforce at large.

### **5. Ensure That Communication of Complex Change Has Effective Metrics**

This research has shown that the communication of reengineering seemed to lack specific metrics to gauge the communication effectiveness of the change. Measuring the effectiveness of a communication strategy is as important as the organizational objective leadership is trying to implement.

## **D. WHAT SHOULD SOUTHWEST DIVISION LEADERSHIP DO NOW?**

- **Understand fully the communication techniques of complex change and their impact on the entire organization**

Communicating complex change such as organizational reengineering is a tremendous challenge for organizational leadership. Many scholars of complex change such as Hammer, Colin Coulson, Manganelli and Klein, and Daniel Hunt have recognized the challenge facing organizational leaders and have published their insights on communicating a complex change such as reengineering.

Given the magnitude of complex organizational changes such as reengineering, the researcher discussed these insights in the Literature Review of this thesis.

Additionally, the researcher's survey results of Southwest Division employees determined the specific communication methodologies Southwest Division leadership implemented during this transformation. Although all survey respondents concurred regarding the top-down communication media used, the magnitude and methods with which those media were utilized varied. Clearly, the methods leadership utilized have had a long-term impact on the organization; consequently, lessons can be learned for the implementation of future complex organizational transformations.

- **Communication of complex change must penetrate all levels of the organization**

Respondents generally agreed that one of the greatest obstacles leadership faced was that personnel at the lower levels of the organization felt alienated and were being coerced into change without adequate feedback loops.

- **Leadership must be receptive to the positive and negative consequences of communication efforts and learn from them.**

The communication of complex organizational change is no simple task for leadership. Although leadership has performed commendably in many aspects of their communication of complex change, the research has shown that there is room for improvement. In essence, the perceived tone of messages communicated needs to be analyzed as noted by respondents concerned about the initial meeting with the CO during reengineering inception at Southwest Division.

More democratization and meaningful feedback loops is essential. Organizational "buy-in" of radical change in a short time frame means that leadership must be extremely cognizant of the consequences of their communication efforts and be willing to change communication methods if necessary in order to achieve desired objectives without losing the support of all levels of the organization. Furthermore, metrics for communication effectiveness are needed for leadership to determine if their communication attempts have been successful. In essence, leadership must be keenly attuned to the reactions of how organizational transformation messages are perceived.

Lack of adequate buy-in cannot always be perceived as the fault of those personnel being forced to change but may be a consequence of the way that organizational change is communicated. If it is perceived by individuals within the



organization that they are not human beings but rather are mechanical entities expected to be tolerant and hastily absorb changes without dissent, this may ironically initiate the very dissent leadership is trying to avert. In essence, failure to be keenly attuned to communication tactics can be a significant contributory factor to failure of the change effort and may even lead to personnel defecting from the organization.

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## **APPENDIX. SURVEY**

### **COMMUNICATION OF REENGINEERING QUESTIONS**

Hello,

The following is a list of questions that I would appreciate your feedback on. These are questions to assist me with the completion of my thesis requirement at the Naval Postgraduate School. My thesis topic is to analyze how effectively the reengineering process has been communicated within the Naval Facilities Engineering Command (NAVFAC) community. My objective is to clearly define reengineering, why it was embraced by NAVFAC, how it was communicated, where it was successful, obstacles that were encountered, and where it could have been improved. In conclusion, I hope to derive action recommendations for improved communication of organizational transformations such as reengineering.

Please assist me with the following questions and returning them to me NLT COB Wednesday, November 21st.

#### Questions:

- (1) How was reengineering being communicated?
- (2) Why did Southwest Division embrace reengineering?
- (3) Who communicated reengineering?
- (4) What was communicated about reengineering?
- (5) What were employees expectations about reengineering?
- (6) What metrics were used to determine the success of the communication efforts?
- (7) What were the strengths and weaknesses of how reengineering was communicated?
- (8) What was the customer perception of how reengineering was communicated?
- (9) What was the perception of how effectively reengineering was communicated to personnel?
- (10) What obstacles did leadership encounter while communicating reengineering?

- (11) Do you have any suggestions for improved communication for organizational transformations such as reengineering?

## LIST OF REFERENCES

1. Coulson, C., Business Process Reengineering: Myth and Reality, 1997.
2. Morris, D. and Brandon, J., Reengineering Your Business, 1993.
3. Carr, D. and Johansson, J., Best Practices in Reengineering, What Works and What Doesn't in the Reengineering Process, 1995.
4. Manganelli, R and Klein, M., The Reengineering Handbook, A Step-By-Step Guide to Business Transformation, 1994.
5. Hunt, Daniel, Process Mapping, How to Reengineer Your Business Processes, 1996.
6. Hammer, M., The Reengineering Revolution, 1995.
7. Hammer, M., Beyond Reengineering, How the Process-Centered Organization is Changing Our Work and Our Lives, 1997.
8. Hammer, M. and Champy, J., Reengineering the Corporation: A Manifesto for Business Revolution, 1994.
9. Harrington, J., Business Process Improvement Workbook, Documentation, Analysis, Design, And Management of Business Process Improvement, 1997.
10. Nissen, Mark E., Contracting Process Innovation, National Contract Management Association, Vienna, VA, 2000.
11. Poirier, Advanced Supply Chain Management, Berrett-Koehler Publishers, San Francisco, CA, 1999.
12. Roberts, L., Process Reengineering, The Key to Achieving Breakthrough Success, 1994.
13. Southwest Division, Installation Engineering Team (IET) West Business Lines Delivery Process, 1995.
14. Southwest Division, Standard Organization and Regulations, July 1999.
15. Womack, James P. and Jones, Daniel T., Lean Thinking, 1996.

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